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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/945,146	08/31/2001	Christopher M. Wolfe	MNRES-001XX	1601

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GROSSMAN, TUCKER, PERREALT & PFLEGER, PLLC
55 SOUTH COMMERICAL STREET
MANCHESTER, NH 03101

EXAMINER

ORTIZ, ANGELA Y

ART UNIT	PAPER NUMBER
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1732

DATE MAILED: 05/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/945,146

Applicant(s)WOLFE ET AL. *eb***Examiner**

Angela Ortiz

Art Unit

1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22-26, 29, 30, 32 and 33 is/are rejected.
- 7) ☒ Claim(s) 27, 28 and 31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 22-26, 29, 30, 32, 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asada et al., USP 4,395,817 in view of Nakajo, USP 6,660,200.

The cited primary reference substantially teaches the basic claimed process of making a keypad structure wherein a film is provided with perforations, and positioned within a switch key-shaped mold cavity such that a resin inlet directs resin through the perforation of the film, and injection molding plastic resin within the mold cavity to form a switch key integral with the film. The detailed method steps include providing specially designed mold blocks that consist of a first block and a second block and placing a plastic sheet having through-holes between the blocks. The first mold block is shaped for forming keys and the second mold block for forming spacers. The mold is also provided with injection gates connected to the cavities via the through-holes (11g) of the plastic sheet. A thermoplastic polyester ABS resin is injection molded within the cavity and forms a switch key and spacer bonded to the plastic sheet, such that the plastic material flows through and around the holes in the plastic sheet.

Note that in figure 7, there are at least 2 through-holes (11g) depicted and described at col. 3, lines 1-5, and these help to anchor the molded structures to the film.

See col. 2, lines 10-25, 60-68; col. 3, lines 1-40.

The cited primary reference does not teach the claimed retainer sheet, or the claimed cutting step.

The added reference teaches a method for manufacturing a sheet shaped key top wherein a plastic sheet is shaped to form an outline of a key top, which is readable on the claimed retainer sheet, and including providing a hole at an additional location for forming a core, which is readable on the instant claimed anchor. A plastic resin is injection molded onto the sheet and fills the outlined key top cavity, as well as flows through the hole formed at another location for forming a core section.

Note that the core is formed by flowing plastic through the sheet, on the opposite side of the sheet, to form at least one anchor portion. Also note that in figure 1, at least two anchor portions are depicted, see features (4) and (5).

See col. 4, lines 11-35.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to shape the plastic sheet in the form of an outline as shown in the added reference, when performing the process set forth in the primary reference for forming a key top surface covered with the plastic sheet. With respect to the cutting step, note that the primary reference teaches punching the sheet to form the holes at col. 3, lines 1-6; it would have been obvious to so include cutting as such is equivalent to punching and equivalently achieves the desired perforation.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provided at least two through holes as shown in the primary reference, and to flow plastic through the sheet material at the through holes and

around portions of the sheet material to form at least two anchor portions for securely attaching the molded key top surface to the film or sheet used.

Allowable Subject Matter

Claims 27-28 and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments filed 27 February 2004 have been fully considered but they are not persuasive.

Applicant argues that the applied Asada reference does not teach the newly claimed feature of flowing material around portions of the sheet and hardening on opposite sides of the sheet to form at least two anchor portions; or the step of placing the film in a molding tool such that the holes are located between respective keycap mold cavities and anchor mold cavities such that material passage regions are located within respective mold cavities.

Note that this feature is clearly shown in Nakajo, USP 6,660,200 at col. 5, lines 45-60 and figure 5. Note that figure 1 of Nakajo, USP 6,660,200 shows multiple molded key tops (at least two) that are formed at through-holes or recesses, and have an adjacent core portion, readable on the claimed anchor portions. Furthermore, note that

in the above-referred reference, the through-holes or recesses can be formed between the respective keycap mold cavities and core cavities.

Applicant argues that in the Nakajo, USP 6,660,200 reference, the anchor portion (5) does not provide rotational stability to the key.

Note that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Applicant argues that Asada does not teach providing both at least one hole and at least one material passage region as recited in claim 29.

Note that in figure 7 of the Asada reference, there are at least 2 through-holes (11g) depicted and described at col. 3, lines 1-5, and these help to anchor the molded structures to the film. The injected resin fills whatever void is present and allows entry of the resin, including the cavity and hole and passage as is known to one of ordinary skill in the art.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

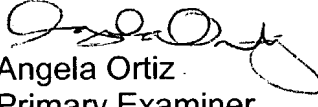
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela Ortiz whose telephone number is 571-272-1206. The examiner can normally be reached on Monday-Thursday 9:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on 571-272-1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Angela Ortiz
Primary Examiner
Art Unit 1732

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